



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,294	05/19/2004	Frederic Plante	IBM-021	5608
51835	7590	66/22/2009		
IBM LOTUS & RATIONAL SW c/o GUERIN & RODRIGUEZ 5 MOUNT ROYAL AVENUE MOUNT ROYAL OFFICE PARK MARLBOROUGH, MA 01752			EXAMINER	
			WEL,ZHENG	
			ART UNIT	PAPER NUMBER
			2192	
			MAIL DATE	DELIVERY MODE
			06/22/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/849,294	<b>Applicant(s)</b> PLANTE, FREDERIC
	<b>Examiner</b> ZHENG WEI	<b>Art Unit</b> 2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 04 March 2009.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-4 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-4 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_

5) Notice of Informal Patent Application  
6) Other: \_\_\_\_\_

## DETAILED ACTION

### *Remarks*

1. This office action is in response to the amendment filed on 03/04/2009.
2. Claims 1-4 remain pending and have been examined.

### *Response to Arguments*

3. Applicant's arguments filed on 03/04/2009, in particular on pages 2-4, have been fully considered but they are not persuasive. For example:
  - At page 3, second paragraph, the Applicants submit that Zgarba does not address or suggest how to proceed if both the source code and software model are independently changed between synchronizations. However, Examiner respectfully disagrees.

As Zgarba disclosed (col.4, lines 22-27), "This allows for proper 'round-trip' engineering of the software project, so that the software model and the source code can be kept synchronized, updates in both the source code and the software model will be maintained..." [emphasis added]. Moreover, Zgarba further discloses "the existing source code 4 is merged with the data from the software model 2 whereby to generated new source code 8 which then replaces the existing source code" [emphasis added] (see for example, col.4, lines 35-38). That is to say "the data from the software model" (model changed) and "the existing source code" can be merged to generate the new source code, wherein "the existing source code" includes "any parts of the

source code not represented by the software model" (modified source code)(see for example, col.4, lines 40-45). Therefore, with the "round-trip", any independently changed/modified artifacts can be synchronized by merging in the same format either in source code format or software model format as disclosed by Zgarba.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Zgarba (US 6,502,239 B2)

Claim 1:

Zgarba discloses a method for synchronizing a first artifact (source code) and a second artifact (software model), the first and second artifacts being interdependent and each artifact being modified independent of a modification to the other artifact after a last synchronization (see for example, Fig.1, and related text; also see col.1, lines 43-46), the first and second artifacts each having a plurality of elements and being of different formats (C++ and CDIF), the method comprising:

- Performing a forward engineering operation to generate a temporary artifact (generic meta-model) having all the elements of a last synchronized version of the first artifact and having all the elements of a latest version of the second artifact transformed as the first artifacts (see for example, col.5, lines 3-5, “...parsing the code and transforming all the elements of the code...into a generic meta-model...”; also see col.6, lines 30-33, “If a software model 2 is already present when the data from the source file is imported into the software model, and data from the source file is to be merged into the software model rather than replacing it...”)
- merging the temporary artifact and a latest version of the first artifact to create a synchronized version of the first artifact (see for example, col.7, lines 2-5, “...merging the data in the software model 2 with any existing source code 4, adding new code, changing code or removing code when necessary to create new source code 8”; also see col.4, lines 35-45); and
- performing a reverse engineering operation to generate a synchronized version of the second artifact having all the elements of the latest version of the second artifact and having all the elements of the synchronized version of the first artifact transformed as the second artifact (see for example, Fig.4, step 10, generating software model from newly generated source code; also see col.3, line 67- col.4, line 3, “...permit generation of software models from source code using various different modeling methodologies and also permit the engraftation of source code from the software model”)

Claim 2:

Zgarba also discloses the method/system of claim 1 wherein one of the first and second artifacts is a software model artifact (software model) and the other of the first and second artifacts is a code artifact (source code) (see for example Fig.1, Fig.4, "Software Model", "source code" and related text)

Claim 4:

Zgarba also discloses the method of claim 2, wherein the code artifact is a 3GL source file. (see for example, col.3, lines 49-55, C++ programming language)

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zgarba (US 6,502,239 B2) in view of Iyengar (US 6,038,393)

Claim 3:

Zgarba discloses the method of claim 2, but does not explicitly disclose wherein the software model artifact is a Unified Modeling Language (UML) file. However, Iyengar in the same analogous art of transforming application into UML and/or UML models into application (see for example, ABSTRACT, "The system also transforms legacy business processes, including legacy applications into UML format...The system also allows the reverse engineering and reverse transformation of UML models ...into application components"). Therefore, it

would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the UML language to represent the software model in Zgarba. One would have been motivated to do so to standardize the model transformation with other object models as suggested by Iyengar (see for example, col.3, and lines 22-38, "UML is the result of an effort to create standardization in the various object-oriented methods")

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's arguments with respect to claims rejection have been considered but are not persuasive. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zheng Wei whose telephone number is (571) 270-1059 and Fax number is (571) 270-2059. The examiner can normally be reached on Monday-Thursday 8:00-15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571- 272-1000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Zheng Wei/  
Examiner, Art Unit 2192

/Tuan Q. Dam/  
Supervisory Patent Examiner, Art Unit 2192